

Notice of Allowability

Application No.

10/791,037

Examiner

Khanh B. Duong

Applicant(s)

TAKAHASHI, YOSHIMI

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendments filed on August 14 and 29, 2006.
2. ☒ The allowed claim(s) is/are 1,3-12 and 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date this paper.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

This Office Action is in response to the amendments filed on August 14 and 29, 2006.

Accordingly, claims 1, 5, 10 and 20 were amended, and claim 2 was canceled. Claims 13-19 were previously canceled in the reply filed January 23, 2006.

Currently, claims 1, 3-12 and 20 remain pending.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Yingsheng Tung on October 25, 2006.

The application has been amended as follows:

In the claims:

Claim 4, line 1, after "Claim", delete "2" and insert --1-- therein.

Allowable Subject Matter

Claims 1, 3-12 and 20 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record, taken alone or in combination, fairly shows or suggests all the limitations as claimed.

Re claim 1, none of the prior art of record discloses the following limitations in combination with the rest of the limitations in the claim: positioning a film adjacent a first die

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structure such that a particular mold block coupled to the film is located in a die cavity in the first die structure, the particular mold block comprising mold compound and at least substantially holding its own shape, wherein the cavity in the first die structure being wider than the mold block in a first direction such that one or more unfilled portions of die cavity exist around the mold block; and compressing the mold block to deform such that the mold compound of the mold block at least partially fills the one or more unfilled portions of the die cavity.

Re claim 20, none of the prior art of record discloses the following limitations in combination with the rest of the limitations in the claim: using the film advancement apparatus operable to advance the film such that a mold block coupled to the film is located in a die cavity in the first die structure, the mold block comprising mold compound and at least substantially holding its own shape, the mold compound comprising a solid, a gel or a paste; wherein the die cavity is wider than the mold block in a first direction and longer than the mold block in a second direction such that one or more unfilled portions of the die cavity exist around the mold block before the mold block is compressed; and moving at least one of the first die structure and the second die structure toward the other die structure to cause the integrated circuit structure to compress the mold block within the die cavity to cause the mold block to deform such that the mold compound of the mold block at least partially fills the one or more unfilled portions of the die cavity and forms a mold cap covering at least one of the one or more integrated circuit devices.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fan '032 and Inoue '802 disclose the use of compression molding to encapsulate integrated circuit structures. However, none of these prior art references discloses the combined limitations as recited in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Duong whose telephone number is (571) 272-1836. The examiner can normally be reached on 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith, can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBD


Zandra V. Smith
Supervisory Patent Examiner

26 Oct 2008